CLAIMS

1. A moving-magnet-type linear slider comprising a linear guide which movably supports and guides left and right sides of a table arranged parallel with and opposite to a fixed base wherein the linear guide includes a slider and a guide rail, a linear motor which reciprocally moves the table in a longitudinal direction over the guide rail relative to the fixed base, and detecting means for detecting a relative position of the table and the fixed base, characterized in that

the linear motor comprises an armature having an multi-phase armature winding wire wound on an armature core serving as a magnetic circuit fixed on the fixed base, and a permanent magnet for a magnetic field, the permanent magnet being attached on the table and arranged opposite to the armature interposing a magnetic gap,

the detecting means comprises a linear scale portion fixed to the table, and a sensor head portion which detects the linear scale, the a sensor head portion being attached on a fixed base side, and

the armature is arranged such that a thrust center axis where a thrust of the armature is generated is substantially coincident with a center axis of a space between the left and right guide rails.

2. The moving-magnet-type linear slider according to claim 1, characterized in that a magnetic-pole detector which detects a relative position of the armature and the permanent magnet for a magnetic field is structurally arranged on an opposite side of the linear scale, wherein a hall element constituting a part of the magnetic-pole detector is fixed on the fixed base side, and a magnetic-pole detector permanent magnet constituting another part of the magnetic-pole detector is fixed on the table side so as to have an equal pitch as the permanent magnet for a magnetic field.

3. The moving-magnet-type linear slider according to claim 1, characterized in that the fixed base is provided with a mounting hole for attaching to an external apparatus in a position outside or inside of the guide rail.

4. The moving-magnet-type linear slider according to claim 1, wherein the sensor head incorporates a circuit which converts a magnetic-pole-detection signal and a scale signal of the linear motor into serial signals.

5. The moving-magnet-type linear slider according to claim 1 or 4, characterized in that the sensor head has a memory into which a motor parameter of the linear motor is input, wherein, when the linear slider and a driver are connected together, the motor parameter is also converted into a serial signal by the serial-signal conversion circuit, thus providing a contrivance to transmit the signal to the driver.

6. The moving-magnet-type linear slider according to claim 1, characterized in that the linear scale mounts thereon an absolute-type encoder which detects an absolute position signal of the linear-motor mover.